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ABSTRACT

By 1980, 50 percent of all Americans were employed in information-related careers, and it is estimated that by 1990, the "Information Society" will have captured 70 percent of careers. The number working in heavy industry today will be reduced 80 percent by the year 2000. As a result of these employment changes, together with the coming revolutions in electronics and biology, careers will continue to show dramatic change. A question often raised is whether the projected population of the future will have the skills for the future. Unless changes occur in the educational process, the gap between minorities and the mainstream population will become even greater.To prepare students for the employment of the future, educators need to reassess the skills the students are now being taught. Many specific skills in technological areas will be needed, but the most important tools that can be provided for youth are those of analysis, judgment, and critical thinking. Activities to develop these skills can be incorporated into any subject area. "Introducing a Futures Perspective into the Career Education Curriculum," published by the Office of the Los Angeles County Superintendent of Schools, provides a series of lessons designed to teach students to think critically about themselves and the future. (KH)

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CAREER AND WORK IN THE 1990's: A CHALLENGE TO OUR PRESENT EDUCATIONAL FOCUS

Janet Cameron Fisher

Entering the 20th century, over 80% of the population was involved in agricultural pursuits. The job market was heavily oriented toward supporting an agricultural economy. Even the public schools maintained this perspective. The September to June school year was developed not on the basis of educational research but only to allow students to work in the fields.

As the Industrial Age grew and the U.S. moved away from agriculture as its major focus, the work force changed so that by 1930 more were employed in industry than in agriculture. Overlapping these trends was the growth of the service economy; by 1980, 30% were employed in this sector.

Even more rapid in growth was the emerging Information Society. By 1980, 50% of all Americans were employed in information related careers, while those in agriculture had dropped to an all time low of 2%. It is estimated that by 1990, the Information Society will have captured 70% of the careers. The number working in heavy industry today will be reduced 80% by the year 2000 (Harmon, 1979). As a result of these employment changes, the coming electronics revolution, and the emerging biological revolution, careers will continue to show dramatic change. By the time current kindergarten

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children retire, perhaps 90% of the jobs that will be available then do not exist now.

The question has been raised as to whether or not the projected population of the United States will have the skills for the jobs of the future (Enzer, 1983). The competencies needed for these new careers will be much different from those emphasized by the current vocational curriculum. According to O'Toole (1983), "The worker of the future is not the manual laborer of the vocationalists' imagination, but a 'data communicator' with heavy responsibilities - both technical and moral ~~—that~~ require the judgment and analytical skills that are characteristic of the broadly educated person."

New jobs will encompass many areas and will reflect a myriad of technical advances. They will require workers with highly developed communication skills (listening, speaking), observation and measurement techniques, and the ability to analyze, make decisions, and solve problems.

The office of the future will require people skilled in the use of very sophisticated information systems. Office workers will have equipment which will replace the need for filing, stenography, and typing; they will need to be able to access the available information and make independent decisions.

Factory workers will no longer have to do the dirty, dangerous, repetitive jobs; the robots will be able to do those. Instead, most factory workers will be involved with

installing, programming, monitoring, and repairing the robots, a specialty which will require very high level skills.

Cetron and O'Toole (1982) have suggested many future occupations in their article outlining their perspectives of careers in the 1990's. Some of the more intriguing jobs mentioned include those of housing rehabilitation technicians, genetic engineering technicians, holographic inspection technicians, and bionic-electronic technicians.

These changes that are occurring in the work role will impact heavily upon minority populations. Minorities have traditionally been under-represented in white-collar/high level skill jobs. Unless changes occur in the educational process, the gap between minorities and the mainstream population will become even greater. Minorities have been most often employed in blue-collar jobs but with the advent of the revolution in technology even those openings will require more sophisticated skills.

To prepare students for future employment, educators need to assess again the skills the students are now being taught. It is true that many specific skills in technological areas will be needed, but the most important tools that can be provided for youth are those of analysis, judgment, and critical thinking. Activities to develop these skills can be incorporated into any subject area.

Introducing a Futures Perspective into the Career Education Curriculum (1982) provides a series of lessons, K-12, which give the students opportunities to analyze and think

critically about themselves and their future. Lessons include activities designed to develop future-focused role images, forecasting, short and long term goals, plans for achieving goals, and scenarios concerning future events. Other activities involve role playing and simulation games, such as Human Survival - 2025 (EDU-GAME, 1974) and "Improvising the Future." In this latter activity, seven steps are followed to assist students looking at the future:

(1) Divide into the following groups according to "age levels"

(a) 8-11 years olds
(b) 14-17
(c) 20-23
(d) 40-43
(e) 60-63

(2) Assign each member of the group a distinguishing characteristic:

i.e., 8-11 - bully or child-genius
14-17 - cheerleader or unwed mother/father
40-43 - Avon lady or truck driver
60-63 - school cafeteria worker or legal secretary

(3) Each group selects one or two changes they would accept from a list of possible future events/realities in given areas:

i.e.,Transportation - monorail system linking major cities
Products - pill food, robot servants, unisex/unistyle clothing

(4) Tabulate results. Acceptances and rejections cancel out.

(5) Group interaction. Make deals or convince others to change selection.

(6) Retabulation.

(7) Improvisation: Projection 25 years ahead which focuses on the two items selected (accepted) in a particular category. Create a scenario.

Above all, in any classroom activity, opportunities should be created to encourage the students to analyze situations and

make decision. Educators must be aware that the changing role of work will require changing the patterns of curriculum and instruction.

Students are in the future - the world of the future with all its new dynamics belongs to them. The educational task is to prepare them for a significantly different Twenty-First Century.

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